

NOTE

New State Record of *Culex coronator* Dyar and Knab (Diptera: Culicidae)
From Mississippi

Culex (Culex) coronator Dyar and Knab, is one of six species in the *Culex coronator* complex as defined by Bram (1967). This complex is very widely distributed between Argentina and the southern United States, but is poorly understood and differentiated primarily by male genitalia characters. Bram (1967) determined that *Cx. coronator* is the only member of the complex to occur in the United States. The currently recognized distribution for *Cx. coronator* in the United States is listed as Arizona, New Mexico and Texas (Darsie and Ward 1981). This paper reports the first collections of *Cx. coronator* from Mississippi, which represents a considerable eastward and northern extension of the previous distribution.

New collection records.—*Culex coronator* Dyar and Knab: Copiah Co., Mississippi, Copiah County Wildlife Management Area, 22 September 2004, CDC light trap baited with CO₂, Collector: Jerome Goddard, 1 ♀; Copiah Co. Wildlife Management Area, 1 October 2004, CDC light trap baited with CO₂, Collector: Wendy Varnado, 1 ♀; Copiah Co., Mississippi, 7 December 2004, CDC light trap baited with CO₂, Collector: Wendy Varnado, 2 ♀.

All specimens were collected as a result of a statewide survey of mosquitoes of Mississippi funded by a West Nile virus grant from the Centers for Disease Control and Prevention. Collections were made by hanging CDC light traps baited with dry ice (CO₂) in late afternoon in selected sites and retrieving the traps first thing the next day. Mosquitoes were killed by freezing, glued to pinned paper points, labeled with collection information, and identified using Carpenter and LaCasse (1955), Darsie and Ward (1981), and Clark-Gil and Darsie (1983). The September–October specimens

of *Cx. coronator* were collected at Copiah County Wildlife Management Area (CCWMA), an undisturbed area in central Mississippi containing numerous semi-permanent pools fed by springs as well as numerous rain-filled woodland pools. The CCWMA is composed of open fields, vast pine forests, and creek bottoms containing mature hardwoods (predominantly oak and hickory). The December specimens of *Cx. coronator* were collected in a wooded area approximately six km east of the CCWMA and within thirty meters of a paved county road.

After collecting *Cx. coronator*, extensive efforts were made to find the breeding site(s). Roadside ditches, swales, artificial containers, and woodland pools were sampled in a three square mile area by dipping and looking for larvae. All specimen identifications, adults and larvae, were confirmed by the third author. Specimens have been deposited in the Mississippi Entomological Museum, Mississippi State University, Starkville, MS, the Public Health Pest Management mosquito collection, Winston-Salem, NC, and the Smithsonian Institution mosquito collection, Washington, DC.

The presence of *Culex coronator* in Mississippi was unexpected in light of the generally tropical nature of this species. Confirmation that these collections represent an established breeding population of *Cx. coronator* was confirmed by finding hundreds of larvae in three widely separated areas near the original adult collection site. Larvae were found in a small spring in the woods, as well as in two separate roadside ditches/swales.

The initial U.S. collections of *Cx. coronator* occurred in Texas (Randolph and O'Neill 1944, Rueger and Druce 1950,

Eads et al. 1951). These Texas records were extended by Hill et al. (1958), who recorded *Cx. coronator* from Bexar, Bowie, Cameron, Dimmit, Hidalgo, Liveoak, Milam, Starr, Webb, and Willacy counties. In 1953, Richards et al. (1956) found this species in Cochise and Pima counties, Arizona, and Wolff et al. (1975) found it in two sites in Dona Ana County, New Mexico. However, there is another old record that should now be considered. Hill et al. (1958) reported one male and two females of this species collected in 1953 in Vernon Parish (Ft. Polk), Louisiana. This record was not included in the most recently published distributions for this species (Darsie and Ward 1981) because Carpenter (1970) suggested the Louisiana record should be deleted until it could be confirmed. Although finding *Cx. coronator* in Mississippi does not validate the Hill et al. (1958) record for Louisiana, it certainly suggests that those identifications of *Cx. coronator* from Louisiana were correct.

LITERATURE CITED

- Bram, R. A. 1967. Classification of *Culex* subgenus *Culex* in the New World (Diptera: Culicidae). Proceedings of the Entomological Society of Washington 120: 1–222.
- Carpenter, S. J. 1970. Review of recent literature on mosquitoes of North America. Supplement I. California Vector Views 17: 39–65.
- Carpenter, S. J. and W. J. LaCasse. 1955. Mosquitoes of North America (North of Mexico). University of California Press, Berkeley and Los Angeles, CA.
- Clark-Gil, S. and R. F. Darsie, Jr. 1983. The mosquitoes of Guatemala. Mosquito Systematics 15: 151–284.
- Darsie, R. F. Jr. and R. A. Ward. 1981. Identification and geographical distribution of the mosquitoes of North America, north of Mexico. Mosquito Systematics Supplement 1: 1–313.
- Eads, R. B., G. C. Menzies, and L. J. Ogden. 1951. Distribution records of west Texas mosquitoes. Mosquito News 11: 41–47.
- Hill, S. O., B. J. Smittle, and F. M. Philips. 1958. Distribution of mosquitoes in the fourth U.S. Army area. Entomology Division, Fourth U.S. Army Medical Laboratory, Fort Sam Houston, TX, 155 pp.
- Randolph, N. M. and K. O'Neill. 1944. The mosquitoes of Texas. Bulletin of the Texas State Health Department, 100 pp.
- Richards, C. S., L. T. Nielsen, and D. M. Rees. 1956. Mosquito records from the great basin and drainage of the lower Colorado River. Mosquito News 16: 10–17.
- Rueger, M. E. and S. Druce. 1950. New mosquito distribution records from Texas. Mosquito News 10: 60–63.
- Wolff, T. A., L. T. Nielsen, and S. O. Hayes. 1975. A current list and bibliography of the mosquitoes of New Mexico. Mosquito Systematics 7: 13–17.
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